Attorney Docket No.

2300-1238.11 (PP01238.115)

Express Mail Label No.: EL 985 780 304 US

Date of Deposit: 8/19/03

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of GRANOFF et al.

Serial No.:

DIV of 09/910,552

Examiner: Unassigned

Confirmation No.:

Art Unit: Unassigned

Filed:

On even date

For:

METHODS FOR ISOLATING MOLECULAR MIMETICS OF UNIQUE

NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES (as amended)

Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

#### INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(b)

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98.

and i.	<i>7</i> 0.
[]	Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO-1449 is enclosed.
[X]	No copies of the publications listed on the attached Form PTO-1449 are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No. 09/910,552 to which the above-identified application claims priority under 35 U.S.C. §120.
[]	Publication(s) listed on the attached Form PTO-1449 were cited in a foreign search or examination report corresponding to application serial no and mailed on
[]	Enclosed is a copy of a non-English publication(s) Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).

[]	Enclosed is a copy of a non-English publication(s) English language
	publication (copy enclosed) claims priority from this non-English
	publication.

- Enclosed is an explanation of non-English publication(s) \_\_\_ for which an  $\Pi$ English translation is not available.
- Enclosed is an English translation of non-English publication(s) \_\_\_cited in the attached Form PTO-1449.
- Enclosed is a copy of pending patent Application Serial No. . .

This Information Disclosure Statement is filed with the herein divisional application.

It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO-1449 to the undersigned.

Please direct all further written communications in this application to:

Alisa A. Harbin Chiron Corporation Intellectual Property – R440 P.O. Box 8097 Emeryville, CA 94662-8097.

Dated: 8/19/03

Respectfully submitted,

CHIRON CORPORATION Intellectual Property - R440 P.O. Box 8097 Emeryville, CA 94662-8097

Telephone: (650) 493-3400

Facsimile: (650) 493-3440

By:

Roberta L. Robins 33,208

Reg. No.

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 1 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

#### U.S. PATENT DOCUMENTS

Exam.l nit.	Ref. Desig.	Document No.	Date	Name	Class	Sub Class	Filing Date
	A1	4,356,170	10-26-1982	Jennings et al.			
	A2	4,727,136	February 23, 1988	Jennings et al.			
	А3	4,970,070	November 13, 1990	Raff, H.V.			
	A4	5,576,002	November 19, 1996	Jennings et al.			
	A5	5,683,699	11-04-1997	5,683,699			
	A6	5,811,102	09-22-1998	Jennings et al.			
	A7	5,902,586	05-11-1999	Jennings et al.			
	A8	5,969,130	10-19-1999	Jennings et al.			
	A9	6,030,619	Feb. 29, 2000	Granoff et al.			
	A10	6,048,527	04-11-2000	Granoff et al.			
	A11	10/121,456	Not published	Granoff et al.			

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 2 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

#### FOREIGN PATENT DOCUMENTS

Exam. Init.	Ref. Desig.	Document No.	Publication Date	Country or Patent Office	Class	Sub Class	Trans YES	lation NO
	B1	WO 90/06696	June 28, 1990	PCT				
	B2	WO 91/08772	June 27, 1991	PCT				
	В3	WO 96/14086	May 17, 1996	PCT				
	B4	WO98/08543	05 March 1998	РСТ				
	B5	0 1 45 359 A2	June 19, 1985	EPO				

	•
Hх	aminer.

#### Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

#### FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet \_3\_ of \_15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

B6	O 504 202 B1	September 23, 1992	EPO		

#### OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Exam. Init.	Ref. Desig.	Description
	C1	Ashton et al., <i>Microb. Patheogeneis</i> <u>6</u> :455-458 (1989)
	C2	Ashton et al., In: Neisseria 1990, Achtman M. (Ed.), Walter De Gruyter & Co. Berlin pp.187-191 (1991)
	С3	Bartoloni et al., <i>Vaccine</i> <u>13</u> (5):463-470 (1995)

Exam	ın	er	:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

#### FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet \_4\_ of \_15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	·C4	Baumann et al., <i>Biochemistry</i> <u>32</u> :4007-4013 (1993)
	C5	Bitter-Suermann et al., Immunol. Res. pp. 225-237 (1987)
	C6	Bowie et al., <i>Science</i> 247:1306-1310, 1990
	C7	Brisson et al., "Helical Epitope of the Group B Meningococcal α(2-8)-Linked Sialic Acid Polysaccharide," <i>Biochemistry</i> 31:4996-5004 (1992)
	C8	Burgess et al., <i>J. Cell Biol.</i> 111:2129-2138, 1990

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

Mail Stop Patent Application COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, VA 22313-1450

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet \_5\_ of \_15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C9	Cross et al., <i>J. Infect. Dis.</i> <u>147</u> (1):68-76 (1983)
	C10	Devi et al., FEMS Immunol. Med. Microbiol. 14:211-220 (1996)
	C11	Devi et al., In:Neisseria:Proc. Ninth Internet. Pathogenic Neisseria Conference FEMS Immunolog. Med. Microbiol. Evans et al. (Ed.), S.C.C., England pp.427-429 (1994)
	C12	Dubois et al., "A Monoclonal Antibody Against <i>Meningococcus</i> Group B Polysaccharides Used to Immunocapture and Quantify Polysialylated NCAM in Tissues and Biological Fluids," <i>Journal of Immunological Methods</i> 181:125-135 (1995)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

#### FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet \_6\_ of \_15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Ref. Desig.	Description
C13	Frasch, Carl E., "Meningococcal Vaccines: Past, Present and Future," <i>Meningococcal Disease</i> 245-283 (1995)
C14	Frosch et al., <i>PNAS</i> 82:1194-1198 (1985)
C15	Fusco et al., "Preclinical Evaluation of a Novel Group B Meningococcal Conjugate Vaccine that Elicits Bactericidal Activity in Both Mice and Nonhuman Primates," The Journal of Infectious Disease 175:364-372 (1997)
C16	Granoff et al., <i>J. Immunology</i> 160:5028-5036 (1998)
	C13 C14 C15

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

#### FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet \_7\_ of \_15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C17	Granoff et al., "Antibody Responses to the Capsular Polysaccharide of <i>Neisseria Menignitidis</i> Serogroup B in Patients With Meningococcal Disease," <i>Clinical and Diagnostic Laboratory Immunology</i> 2(5):574-582 (1995)
	C18	Gregson et al., Biochem. Soc. Transact. 13:p.462 (1985)
	C19	Hayrinen et al., "Antibodies to Polysialic Acid and its N-Propyl Derivative: Binding Properties and Interaction with Human Embryonal Brain Glycopeptides," The Journal Of Infectious Diseases 171:0001-0010 (1995)
	C20	Horwell, David C., "The 'Peptoid' Approach to the Design of Non-Peptide, Small Molecule Agonist and Antagonists of Neuropeptides," <i>TIBTech</i> 13(4):132-134 (1995)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet \_8\_ of \_15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C21	Hurpin et al., <i>Hybridoma</i> <u>11</u> (6):677-687 (1992)
	C22	Husmann et al., J. Histochem. Cytochem. 38:209-215 (1990)
	C23	Jennings, Harold J., "The Capsular Polysaccharide of Group B <i>Neisseria Meningitidis</i> as a Vehicle for Vaccine Development," <i>Microbiol. Immunol.</i> 10:151-165 (1989)
	C24	Jennings et al., "Induction of <i>Meningococcal</i> Group B Polysaccharide-Specific IgG Antibodies in Mice by Using an <i>N</i> -Propionylated B Polysaccharide-Tetanus Toxoid Conjugate Vaccine," <i>The J. Of Immunology</i> 137(5):1708-1713 (1986)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

Mail Stop Patent Application COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, VA 22313-1450

#### FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 9 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552 Art Unit: Unassigned

Filed: Even Date Herewith Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C25	Jennings et al., "N-Polysialic Group B Meningococcal Polysaccharide Mimic a Unique Epitope on Group B Neisseria Meningitidis," J. Experimental Medicine 165:1207-1211 (1987)
	C26	Jennings et al., "Unique Intermolecular Bactericidal Epitope Involving the Homosialopolysaccharide Capsule on the Cell Surface of Group B Neisseria Meningitidis and Escherichia Coli K1," Journal of Immunology 142(10):3585-3591 (1989)
	C27	Jennings et al., "Immunochemistry of Groups A,B, and C Meningococcal Polysaccharide-Tetanus Toxoid Conjugates," <i>The Journal of Immunology</i> 127(3):1011-1018 (1981)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 10 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C28	Kabat et al., <i>J. Exp. Med.</i> <u>164</u> :642-654 (1986)
	C29	Klebert et al., Biol. Chem. Hoppe Seyler 374:993-1000 (1993)
	С30	Lazar et al., Mol. Cellular Biol. 8:1247-1252, 1988
:	C31	Leinonen et al., Infect. Immun. 38(3):1203-1207 (1982)
	C32	Lifely et al., <i>Immunology</i> 74:490-496 (1991)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet \_11\_ of \_15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C33	Livingston et al., <i>J. Biol. Chem.</i> <u>263</u> :9443-9448 (1988)
	C34	LOMMATZSCH et al., <i>J. Bacteriol.</i> <u>179</u> :5465-5470 (1997)
	C35	Lucas et al., "Functional Differences in Idiotypically Defined IgG1 Anti-Polysaccharide Antibodies Elicited by Vaccination with <i>Haemophilus Influenzae</i> Type B Polysaccharide-Protein Conjugates," <i>The Journal of Immunology</i> 154:4195-4202 (1995)
	C36	Mandrell et al., "Complement-Mediated Bactericidal Activity of Human Antibodies in Poly W α2-8 N-Acetylneuraminic Acid, the Capsular Polysaccharide of <i>Neisseria Meningitidis</i> Serogroup B," <i>The Journal of Infectious Diseases</i> 172:1279-1289 (1995)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 12 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C37	Michon et al., "Conformational Differences Between Linear α(2¬8)-Linked Homosialooligosaccharides and the Epitope of the Group B Meningococcal Polysaccharide," <i>Biochemistry</i> 26:8399-8405 (1987)
	C38	Moreno et al., <i>J. Gen. Microbiol.</i> 129:2451-2456 (1983)
	C39	PIZZA et al., "Identification of vaccine candidates against serogroup B Meningococcus by whole-genome sequencing," <i>Science</i> 287:1816-1820 (2000)
	C40	Pon et al., <i>J. Exp. Med.</i> <u>185</u> :1929-1938 (1997)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 13 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C41	Poolman, Jan T., "Development of a Meningococcal Vaccine," Infectious Agents and Disease 4:13-28 (1995)
	C42	Raff et al., J. Infect. Dis. <u>157</u> (1):118-126 (1988)
	C43	Rougon et al., <i>J. Cell. Biol.</i> <u>103</u> :2429-2437 (1986)
	C44	Sato et al., <i>J. Biol. Chem.</i> <u>270</u> :18923-18928 (1995)
	C45	Sukkonen et al., Microbial. Pathogenesis 1:101-105 (1986)

Examiner:

#### Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

Mail Stop Patent Application COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, VA 22313-1450

#### FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 14 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552 Art Unit: Unassigned

Filed: Even Date Herewith Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C46	TETTELIN et al., "Complete genome sequence of Neisseria meningitidis serogroup B strain MC58," <i>Science</i> 287:1809-1815 (2000)
	C47	Tome et al., Acta Pathol. Jpn. 43:168-175 (1993)
	C48	Vaesen et al., Biol. Chem. Hoppe. Seyler 372:451-453 (1993)
	C49	Westerink et al., "Development and Characterization of an Anti-Idiotype Antibody to the Capsular Polysaccharide of <i>Neisseria Mengingitidis</i> Serogroup C," <i>Infection and Immunity</i> 56(5):1120-1127 (1988)

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the

Mail Stop Patent Application COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, VA 22313-1450

# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Sheet 15 of 15

In the Application of GRANOFF et al.

Serial No.: DIV of 09/910,552

Art Unit: Unassigned

Filed: Even Date Herewith

Examiner: Unassigned

Title: MOLECULAR MIMETICS OF UNIQUE NEISSERIA MENINGITIDIS SEROGROUP B EPITOPES

Exam. Init.	Ref. Desig.	Description
	C50	DataBase WPI., "Novel Strain of <i>Neisseria Meningitidis</i> Group Useful Produce Capsule Polysaccharide Protein Complex," January 30, 1992

Examiner:

Date Considered:

EXAMINER: Initial if citation considered whether or not the citation conforms with MPEP609. Draw a line through the